

(B) exposing said sensor to a biological sample for sufficient time for said untagged single stranded nucleic acid to bind to an untagged material of interest in said biological sample;  
(C) applying light to said sensor; and  
(D) measuring photoluminescence from said sensor, wherein photoluminescence measured in said step of exposing is indicative of binding of said untagged single stranded nucleic acid to said untagged material of interest.

#### REMARKS

Claims 1-23 are pending in the application. Further to the telephonic interview of March 21, 2003:

1) the Office Action of March 11, 2003 was admitted to be in error and will be vacated;  
and 2) claim 1 has hereby been amended to recite the features of claim 3, which has been cancelled.

#### Formal Matters and Conclusion

In view of the foregoing, Applicant submits that the application is in condition for allowance. Examiner is requested to pass the application to issue at the earliest possible time.

Please charge any underpayment or credit any overpayment of fees to attorney's deposit account #50-2041.

Respectfully submitted,



Ruth E. Tyler-Cross


Reg. No. 45,922

Whitham, Curtis & Christofferson  
11491 Sunset Hills Road; Suite 340  
Reston, VA 20190  
703-787-9400

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I hereby certify that I am transmitting a **COMMUNICATION AND AMENDMENT** for  
Application Serial No.: 09/870,986 containing four (4) pages to the U.S. Patent Office at 703-  
746-4979 on March 21, 2003.

  
Ruth E. Tyler-Cross  
Reg. No. 45,922

CLEAN VERSION OF AMENDED CLAIM

Claim 1 A tagging-free method to detect the binding of untagged single stranded nucleic acid to an untagged material of interest, comprising the steps of:

(A) providing a sensor comprised of a first layer and a second layer wherein said first layer comprises an untagged single stranded nucleic acid and wherein said second layer comprises a photoluminescent material, and wherein said first layer and said second layer are separate layers, and wherein said second layer comprises material selected from the group consisting of aromatic polymers, doped or undoped metal oxides, sulfides, arsenides, tellurides, and nitride and phosphide nanocomposites;

(B) exposing said sensor to a biological sample for sufficient time for said untagged single stranded nucleic acid to bind to an untagged material of interest in said biological sample;

(C) applying light to said sensor; and

(D) measuring photoluminescence from said sensor, wherein photoluminescence measured in said step of exposing is indicative of binding of said untagged single stranded nucleic acid to said untagged material of interest.